

Physical Self-Presentation and Competitive Anxiety in Male Master Divers

Ross Lorimer
Loughborough University

Tony Westbury
Edinburgh Napier University

Resubmission: 29 May 2006
R.Lorimer@lboro.ac.uk

Summary

This study investigated the link between physical self-presentation issues and competitive anxiety in male, master level, high-board divers ($N=84$, M age=29.25, $SD=14.25$). Competitive trait anxiety, social physique anxiety, and physical self-presentation confidence, were assessed using the Sport Anxiety Scale, Social Physique Anxiety Scale, and the Physical Self-Presentation inventory. Stepwise regression analyses indicated that variance in competitive anxiety was accounted for by the physical self-presentation variables and that these variables were most strongly associated with the cognitive anxiety subscale Worry, and to a lesser extent, Somatic Anxiety. The results of this study provide support for the argument that physical self-presentation is associated with competitive anxiety in male athletes.

Competitive anxiety has been defined as the feelings of apprehension and tension an individual experiences in response to perceived threats during competition (Martens, Vealey, & Burton, 1990). Due to the detrimental effect that competitive anxiety can have on sport performance, a large body of research has investigated what constitutes a perceived threat and how they act as antecedents to competitive anxiety (Martens et al., 1990)

One potential source of perceived threat is the avoidance of negative social evaluation (Lewthwaite, 1990). Social evaluation is considered an important factor in any competitive setting (Martens et al., 1990), yet until the early 1990s, little research had examined specifically what areas of social evaluation athletes perceived as threatening. Leary (1992) suggested that self-presentational concerns could explain the perceived threat of social evaluation in competitive environments. Self-presentation is the process by which people monitor and control how they are perceived (Leary, 1992); an attempt to portray a particular impression – often to portray themselves in a better light (Leary & Kowlaski, 1990). The competitive environment presents athletes with a number of factors that may increase their desire to portray a specific impression. Advancing in sport may rely on being perceived as being fit or skilled. There is an emphasis placed on performance as defined by the outcomes of a competition. Hence, athletes may feel they need to win or rank highly to demonstrate their skill or ability. Furthermore, sport is a very visible pursuit, often being watched by the public in addition to other competitors and coaching staff. As such, the image portrayed by the athlete is likely to be closely associated with their social-identity (Hudson & Williams, 2001). In these situations where the athlete is highly motivated to portray a particular impression but feels unable to do so they may

perceive a threat to their desired social-identity resulting in feelings of apprehension and anxiety (Schlenker & Leary, 1982).

Martin and Mack (1996) investigated Leary's (1992) postulation that self-presentational concerns may be a source of competitive anxiety. Using athletes drawn from a mixed sample of sports they examined the relationship between Physical Self-Presentation, e.g. body appearance, shape or size, and Competitive Anxiety. They showed that those variables associated with Physical Self-Presentation, i.e. Social Physique Anxiety and Physical Self-Presentation Confidence, were respectively positively and negatively correlated with Competitive Anxiety in women only. Regression analyses showed that these same measures accounted for 21% of the variance in the women's Competitive Anxiety. Martin and Mack (1996) concluded that the difference between genders was possibly due to the importance that is placed on physical appearance for women in social situations, popular media, and even sport environments (MacNeill, 1988).

Martin and Mack (1996) suggested that although they found no evidence for a relationship between Physical Self-Presentation and Competitive Anxiety it did not mean one does not exist. Each sport has its own unique potential for negative evaluation from spectators, competitors, and coaches, and different sports may place more emphasis than others on physical appearance, e.g., diving and gymnastics. Martin and Mack (1996) postulated that the relationship between Physical Self-Presentation and Competitive Anxiety may be stronger in sports that emphasise physical appearance or are subjectively judged, such as high-board diving or gymnastics.

In 1997, James and Collins further explored the possibility of Competitive Anxiety having an underpinning self-presentational framework. They interviewed 10

participants of each gender and highlighted a variety of dimensions of competitive anxiety covering such diverse issues as perceived readiness, skill execution, and including the athletes' physical form. All of which the authors argued could be the result of athletes' concerns about aspects of competition where they believed it was important to portray a specific impression.

Quantitative analysis of self-presentation concerns related to sport, other than those related to physical form, was made possible by the development of two instruments (Williams, Hudson, & Lawson, 1999; Wilson & Eklund, 1998). Both instruments assess similar dimensions, but the Self-Presentation in Sport Questionnaire (SPSQ; Wilson & Eklund, 1998) includes a subscale assessing concerns related to athletes' physical form, which the alternative measure, the Competitive Self-Presentational Concerns Inventory (CSPCI) does not (Williams et al., 1999).

However no paper to date has explored the hypothesis of Martin and Mack (1996) that a relationship between Physical Self-Presentation and Competitive Anxiety may exist for men in those sports that emphasise physical appearance or that are subjectively judged. Evidence indicates that Physical Self-Presentation is a growing issue for men (Garner, 1997) suggesting that further research of the potential relationship into Physical Self-Presentation and Competitive Anxiety in men is worthwhile.

This study examined the hypothesis that Physical Self-Presentation would be predictive of Competitive Anxiety. Specifically that Social Physique Anxiety and Physical Self-Presentation Confidence would predict a significant amount of variance in Competitive Anxiety (Leary, 1992; Martin & Mack, 1996). It was hypothesised

that the relationship would be positive for Social Physique Anxiety and negative for Physical Self-Presentation Confidence (Martin & Mack, 1996).

Method

Participants

Male master divers ($N=84$), defined as divers over the age of 16, were recruited from United Kingdom diving clubs. Participants were accepted from any club willing to be involved provided they were male, a minimum of 16 years of age, and had competed within the last year. Ages ranged from 16 to 84 ($M=29.25$, $SD=14.25$).

Procedure

Approval was sought from clubs and coaches about the participation of their athletes in this study. There were two criteria for athlete participation: (a) that they were at least 16 years of age, and (b) they had engaged in organised competition during the previous year. Clubs and coaches who agreed were sent a pack containing instructions, informed consent forms, questionnaires, and blank envelopes

Data collection was conducted by club coaches before regular training sessions. Athletes first completed informed consent forms. These were then collected before the athletes went on to complete the questionnaire which they each placed in a sealed blank envelope. Athletes were told the study was about “athletes’ responses to competition” and asked not to discuss or consult each other about the nature or content of the questionnaires or their responses until after questionnaires had been collected. Questionnaires were anonymous, consisting of the two measures discussed below, and questions regarding age and gender.

Measures

Three psychometric measures were completed by each athlete to assess Competitive Anxiety, Social Physique Anxiety, and Physical Self-Presentation Confidence. Measures were similar to those used by Martin and Mack (1996) to allow comparison. Differences included modifications made to the Social Physique Anxiety Scale (Hart, Leary, & Rejeski, 1989) that have been suggested as beneficial by more recent research (Martin, Rejeski, Leary, McAuley, & Bane, 1997), and a measure of multidimensional competitive anxiety scale Sport Anxiety Scale (Smith, Smoll, & Schutz., 1990) in place of the somatic-biased Sport Competition Anxiety Test (Martens, 1997) used by Martin and Mack (1996).

The Social Physique Anxiety Scale (SPAS; Hart et al., 1989) was originally a 12-item inventory designed to evaluate dispositional tendency to experience anxiety in situations of perceived evaluation of physique or appearance. The SPAS has since been reduced to a 9-item scale to strengthen the inventory concept and prevent misinterpretation (Martin et al., 1997). This revised inventory has a satisfactory internal consistency ($\alpha = 0.89$; Martin et al., 1997) and has demonstrated a strong correlation with the original scale ($r = 0.98$; Martin et al., 1997).

The Physical Self-Presentation Confidence inventory (PSPC; Ryckman, Robbins, Thorton, & Cantrell, 1982) is a 12-item inventory designed to evaluate confidence in displaying or using one's body. The scale has relatively low retest reliability ($r = 0.69$; Ryckman et al., 1982) and internal consistency ($\alpha = 0.62$; Ryckman et al., 1982) but was used to allow comparison with the results reported by Martin and Mack (1996).

The Sport Anxiety Scale (SAS; Smith, et al. 1990) is a 21-item inventory designed to evaluate dispositional tendency to experience competitive anxiety. The SAS consists of one Somatic Anxiety subscale, and two cognitive subscales, Worry

and Concentration Disruption. Acceptable levels of internal consistency for each subscale have been found ($\alpha = 0.92, 0.86, 0.81$, respectively; Smith, et al., 1990) and the scale as a whole has demonstrated adequate test-retest reliability ($r = 0.85$; Smith et al., 1990)

Analyses

A Pearson bivariate correlations matrix was used to examine the relationship between all variables. Stepwise regression analyses were used to investigate the relationship between Physical Self-Presentation and Competitive Anxiety. Social Physique Anxiety and Physical Self-Presentation Confidence were used as independent variables with each of the three subscales of the SAS, i.e., Worry, Somatic Anxiety and Concentration Disruption, acting in turn as the dependent variable.

Results

Mean and standard deviations are presented in Table 1. Reported scores for Social Physique Anxiety were lower than previous work using male samples (McAuley, Bane, Rudolph & Lox, 1995), while results for Physical Self-Presentation Confidence and the subscales of the SAS were similar to those shown in scale development (Ryckman et al., 1982; Smith et al., 1990).

Table 1 also shows a correlation matrix of the study variables. Social Physique Anxiety was significantly, positively correlated with all three subscales of the SAS ($p < 0.01$), and negatively correlated with Physical Self-Presentation Confidence ($p < 0.01$). Physical Self-Presentation Confidence was modestly, negatively correlated with Worry and Somatic anxiety ($p < 0.01$), but there was no significant relationship with Concentration Disruption.

Table 2 shows beta and R^2 values for the stepwise regression analyses. For Somatic Anxiety and Concentration Disruption, only Social Physique Anxiety was a significant predictor of variance. The regression was a significant predictor of variation in Somatic Anxiety, accounting for 33% of the variance ($F_{1, 82} = 41.33$, $p < 0.01$) and a significant, if poor, predictor of Concentration Disruption, accounting for 14% of variance ($F_{1, 82} = 13.76$, $p < 0.01$). Prediction was comparatively stronger for Worry, accounting for 41% of the variance ($F_{1, 82} = 30.18$, $p < 0.01$), with Social Physique Anxiety accounting for the majority of variance ($R^2 = 0.34$).

Discussion

The purpose of this investigation was to test the relationship between Physical Self-Presentation and Competitive Anxiety in males drawn from high-board diving. While the results of this study appear to support this hypothesised relationship, several interesting differences between this and previous research require further examination.

The descriptive statistics indicated a lower Social Physique Anxiety score than has previously been found in reported male samples (McAuley et al., 1995). This is possibly due to the nature of the different samples used. Previous work with the SPAS has utilised mixed sport amateur athletes and casual exercisers (McAuley et al., 1995). The present sample was comprised of competitive divers whose level of competition and associated fitness, combined with the regular display of their bodies during participation in sport may account for the lower scores. If these divers are actually less anxious about evaluation of their physique then the hypothesis that the relationship between Physical Self-Presentation and Competitive Anxiety may be stronger in sports that emphasise physical appearance or are subjectively judged may be flawed.

While the observed Social Physique Anxiety scores were lower than in previous work, Physical Self-Presentation Confidence scores were similar to the mixed discipline students used in the development of the PSPC scale (Ryckman et al., 1982). This apparent contradiction can be explainable upon examination of the individual items of the SPAS and PSPC scale. While the SPAS is primarily concerned with physical appearance, the PSPC scale incorporates items related to physical interaction and body use in nonsporting situations.

It is possible that involvement in diving resulted in a reduced fear in displaying one's physique compared with other individuals, yet did nothing to improve confidence in using one's body in other situations. Yet, it should be noted the coefficients between Social Physique Anxiety and the three dimensions of competitive anxiety were stronger than those between Physical Self-Presentation Confidence and Competitive Anxiety. Thus fear of displaying ones physique was more strongly associated with competitive anxiety than was confidence in using one's body.

The most important finding of this study was the large amount of variance predicted by the Physical Self-Presentation variables. Previous research in this area reported that Social Physique Anxiety and Physical Self-Presentation Confidence accounted for 21% of the variance in Competitive Anxiety as assessed by the somatically biased SCAT, for women only (Martin & Mack, 1996). The 33% predicted variance in Somatic Anxiety and 41% predicted variance in Worry of this study is substantially higher. An explanation for this is that the subjectively judged and presentation sport of high-board diving, which places large emphasis on the appearance of the performance and subjective evaluation, may be reflected in a perceived self-presentational risk associated with the appearance of divers' physique

and confidence in using their bodies. However, this would seem to conflict with the lower reported scores for Social Physique Anxiety compared with other samples. Although this speculation requires further investigation it has several important implications. The first is that presentation sports such as high-board diving may differ from other sports in regards to the relationship between Physical Self-Presentation and Competitive Anxiety, a potentially important factor in the design and implementation of psychological interventions and coping strategies. The second implication concerns the consistently higher Social Physique Anxiety scores reported by women in comparison to men (McAuley et al., 1995; Martin & Mack, 1996). If athletes in presentation sports, or similar areas such as dance, do have a stronger link between Physical Self-Presentation and Competitive Anxiety, this relationship may be more pronounced in women (Martin & Mack, 1996). This is supported by the frequency of body and self-image distortion found in women involved in these sports, a population group that has a long established association with Physical Self-Presentation (Krane, Waldron, Stiles-ShIPLEY, & Michalenok, 2001). It is recommended that further work in this area using a female sample should be carried out in the future.

Finally, there are several limitations of this study that must be considered when interpreting these findings. The sample size used met only the minimum requirements for the chosen analyses; neither do these analyses allow the exploration of causal implications of this association. While this paper set out to examine the relationship between Physical Self-Presentation and Competitive Anxiety it did not consider many potential moderating influences. Previous works have highlighted competitive level and experience, crowd size, relative importance of the competition, and sport type as probable moderating factors (James & Collins, 1997; Mellalie,

Hanton, & O'Brien. 2004). Further work exploring the points raised in this discussion need to be carried out before any conclusions can be upheld.

References

- Garner, D. The Body Image Survey. *Psychology Today*, 1997, Jan/Feb, 32-84.
- Hart, E., Leary, M., & Rejeski, W. The measurement of social physique anxiety. *Journal of Sport & Exercise Psychology*, 1989, 11, 94-104.
- James, B. & Collins, D. Self-presentational sources of competitive stress during performance. *Journal of Sport & Exercise Psychology*, 1997 19, 17-35.
- Krane, V., Waldron, J., Stiles-ShIPLEY, J., & Michalenok, J. Relationships among body satisfaction, social physique anxiety, and eating behaviours in female athletes and exercisers. *Journal of Sport Behaviour*, 2001, 24, 247.
- Leary, M. Self-presentational processes in exercise and sport. *Journal of Sport & Exercise Psychology*, 1992, 14, 339-351.
- Leary, M. R., & Kowalski, R. M. Impression management: A literature review and two-component model. *Psychological Bulletin*, 1990, 107, 34-47.
- Lewthwaite, R. Threat perception in competitive trait anxiety: the endangerment of important goals. *Journal of Sport & Exercise Psychology*, 1990, 12, 280-300.
- MacNeill, M. Active women, media representations, and ideology. In J. Harvey and H. Carleton (Eds.), *Not Just a Game*. Ottawa, ON: University of Ottawa, 1988. Pp. 195-211.
- Martens, R. *Sport Competition Anxiety Test*, Champaign IL: Human Kinetics, 1977.
- Martens, R., Vealey, R., & Burton, D. *Competitive anxiety in sport*. Champaign, IL: Human Kinetics, 1990.
- Martin, K., Rejeski, W., Leary, M., McAuley, E., & Bane, S. Is the Social Physique Anxiety Scale really multidimensional? Conceptual and statistical arguments for a unidimensional model. *Journal of Sport & Exercise Psychology*, 1997, 19, 359-367.

- Martin, K., & Mack, D. Relationships between physical self-presentation and sport competition trait anxiety: a preliminary study. *Journal of Sport & Exercise Psychology*, 1996, 18, 75-82.
- Mellalieu, S., Hanton, S., & O'Brien, M. Intensity and direction dimensions of competitive anxiety as a function of sport type and experience. *Scandinavian Journal of Science & Medicine in Sport*, 2004, 14, 326-334.
- McAuley, E., Bane, S., Rudolph, D., & Lox, C. Physique anxiety and exercise in middle-aged adults. *Journal of Gerontology*, 1995, 50B, 229-235.
- Ryckman, R., Robbins, M., Thornton, B., & Cantrell, P. Development and validation of a Physical Self-Efficacy Scale. *Journal of Personality & Social Psychology*, 1982, 42, 891-900.
- Schlenker, B., & Leary, M. Social anxiety and self-presentation: a conceptualization and model. *Psychological Bulletin*, 1982, 92, 641-669.
- Smith, R., Smoll, F., & Schutz, R. Measurements and correlates of sport specific cognitive and somatic trait anxiety. The Sport Anxiety Scale. *Journal of Sport & Exercise Psychology*, 1990, 2, 263-280.
- Williams, M., Hudson, J., & Lawson R. Self-presentation in sport: initial development of a scale for measuring athletes' competitive self-presentation concerns. *Social Behaviour and Personality*, 1999, 27, 487-502.
- Wilson, P., & Eklund, R. The relationship between competitive anxiety and self-presentational concerns. *Journal of Sport & Exercise Psychology*, 1998, 20, 81-97.

Table 1.

Correlation and descriptive statistics

Variable	1	2	3	4	5
<i>Competitive Trait Anxiety</i>					
1. Somatic Anxiety	-----	0.66	0.46	0.58	-0.37
2. Worry	0.66	-----	0.62	0.59	-0.51
3. Concentration Disruption	0.46	0.62	-----	0.38	-0.18
<i>Physical Self-Presentation Issues</i>					
4. Social Physique Anxiety	0.58	0.59	0.38	-----	-0.44
5. Physical Self-Presentation Confidence	-0.37	-0.51	-0.18	-0.44	-----
Mean (<i>N</i> =84)	1.87	2.18	1.83	1.39	4.44
Standard Deviation	0.66	0.77	0.71	0.6	0.72

Correlations were significant ($p < 0.01$) except between variables 3/5 ($p > 0.05$)

Table 2.

Stepwise regression analyses

Variable	R ²	Beta
<i>Somatic anxiety</i>		
Social Physique Anxiety	0.33	0.58
<i>Worry</i>		
Social Physique Anxiety	0.34	0.45
Physical Self-Presentation Confidence	0.41	-0.31
<i>Concentration disruption</i>		
Social Physique Anxiety	0.14	0.38

All significant at $p < 0.01$